Deep Seabed Mining

Deep seabed research vehicle, iStock

What is the issue?

Minerals are essential components in many clean energy technologies – copper, nickel, cobalt, manganese and zinc, among others, are needed for wind turbines, electric vehicles, batteries and others. As the energy transition gathers pace, the demand for these minerals will be "supercharged," leading to an ever widening search for new sources, including deep seabed mining (**DSM**). DSM in areas beyond 200 nautical miles from national shores (**DS Area**) is governed by the 1982 UN Convention on the Law of the Sea (UNCLOS). In 1994, UNCLOS established the International Seabed Authority (**ISA**), an autonomous intergovernmental body which considers mining permit requests submitted by mining companies and countries and makes the decision to either accept or reject such requests. As of end-2021, ISA had entered into 31 exploration contracts. Some national governments, for example Norway and Nauru have licensed or are intending to license DSM in their national and non-national (or DS Area) waters.

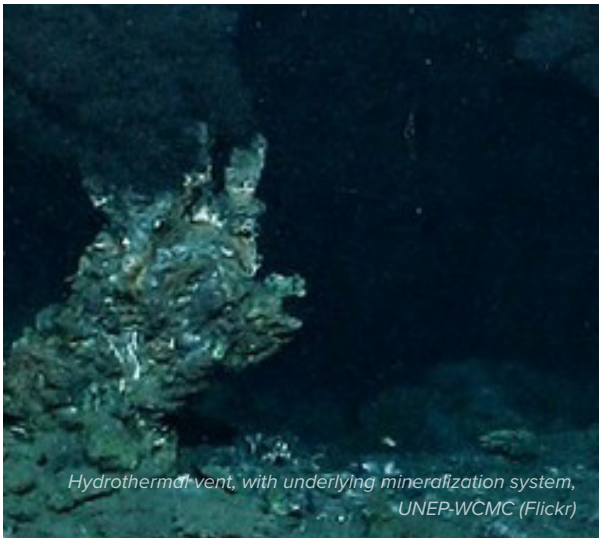
DSM is highly controversial given the unknown consequences on biodiversity, carbon release, fragile ecosystems, fishing and coastal livelihoods, among others. Recent research notes that DSM could contribute to the marginalisation of indigenous peoples. Indigenous groups in the Pacific Islands are likely to be most disproportionally impacted as it is the region where most DSM is slated to take place. The global community has recently reached agreement a High Seas Treaty, that will endeavour to, among other things, protect the marine environment in the DS Area, but it is critical that business and private operators recognise both the invaluable biodiversity and climate functions provided by the deep seabed as well as the human rights of Indigenous and other impacted communities.

> Indigenous groups in the Pacific Islands are likely to be most disproportionally impacted.

ABOUT THE OCEAN AND HUMAN RIGHTS PLATFORM

Led by the **Institute for Human Rights and Business** and the **Rafto Foundation**, the Ocean and Human Rights Platform is a collaborative movement to raise awareness to prevent and address adverse human rights impacts across the ocean's industries. The Ocean Platform works with a global network of business, government, human rights defenders, civil society partners, academia and national human rights institutions.

Contact
francesca.fairbairn@ihrb.org
www.ocean-humanrights.org



Hydrothermal vent, with underlying mineralization system, UNEP-WCMC (Flickr)

Whose human rights are impacted?

The DS Area and its marine mineral resources are "the common heritage of mankind" and thus belong to **all humankind**. In governing these resources, the ISA has a duty to act on behalf of humankind including marginalised and vulnerable communities, as well as future generations. The main impacted group are **indigenous peoples**.

> For many coastal communities, including indigenous peoples, there is a deep cultural and / or spiritual connection to the ocean.

For many coastal communities, including indigenous peoples, which are the main group impacted by DSM, there is a deep cultural and/or spiritual connection to the ocean. DSM is currently in the exploratory stage and is already disrupting the rights of indigenous peoples to practice their customs and uphold their cultural identity. For example, in Tonga, the DSM prospecting vessels have disturbed traditional fishing routes and fish populations. In Papua New Guinea (PNG), sharks have been absent from their natural habitats due to DSM which has prevented indigenous communities from practicing customary shark calling.

As the body responsible for granting permits for DSM and developing mining regulations for an area that is over 50% of the Earth's surface, the ISA should meet high standards of governance and accountability. However, the ISA's existing prospecting and exploration regulations do not include any public participation procedures, and publicly available information on contracting, compliance and even environmental data is not disclosed. The ISA regulations make no reference to traditional knowledge of indigenous peoples or to free, prior and informed consent (**FPIC**). There are inherent conflicts of interest as ISA becomes involved in mining and whilst also being charged with protecting the deep sea environment. The draft Exploitation Regulations do not permit third party stakeholders, including those representing environmental interests and the interests of local communities, to contest final decisions on contracting so there is no access to remedy for decision-making to challenge the approval of a plan of work or an existing contract.

CASE STUDY

Deep seabed mining (DSM) in Papua New Guinea (PNG) has disrupted shark habitats and violated the rights of indigenous communities in PNG to practice customary shark calling. During the exploratory stage, PNG villagers reported seeing large numbers of dead fish – including strange deep-sea specimens hot to the touch – washing up to the shore.

Issues of corruption and the absence of accountability have also made PNG an easy target for high-risk ventures. Therefore, financial institutions should also incorporate action on corruption and the existing processes of anti-money laundering due diligence into any policies and decisions concerning DSM.

> There are inherent conflicts of interest as ISA becomes involved in mining and whilst also being charged with protecting the deep sea environment.

Which industries should pay attention?

There is currently a small handful of mining and exploration companies directly involved in contracting for deep seabed exploration and possible exploitation contracts. They are supported by a wider group of contractors and equipment suppliers, researchers and financial institutions.

DSM is also relevant in other sectors, several of which are anticipated in the draft Exploitation Regulations. These other sectors that rely on DSM minerals include:

End-users

Industries that rely on minerals that can be extracted from DSM range from ICT – phones, cars etc – to wind farms and any product that relies on battery technology. All of these industries should be aware that their demand for critical minerals will determine the cost-effectiveness of DSM.


iStock

Pharmaceuticals, chemicals

Novel compounds found in the deep sea could be used in medicines, chemicals, etc. The market for marine genetic resources is large and growing.

Tourism

There may be real impacts on tourism if mining gets underway as well as anticipatory impacts as potential tourists perception of ocean degradation from DSM such as on diving may dissuade visitors from coming or returning.

Commercial and subsistence fisheries

The habitat removal, disruptions to sealife, sedimentation plumes, potential contamination, exclusion zones and increased maritime traffic can threaten both commercial and subsistence fisheries.

Shipping

An estimated 52% of deposits are in potential conflict with commercial shipping routes.

Telecommunications and extractives

Mining must avoid damage to submarine cables and pipelines.

What should businesses do?

A far wider set of businesses may be faced with the choice about whether to purchase minerals mined from the deep seabed in the future. Those potential end-users should:

- **Consider developing and disclosing a position on non-purchase of deep seabed minerals** as this will provide important signals to the market and to governments negotiating the draft Exploitation Regulations. Several prominent potential end-users businesses have already committed not to purchase minerals mined from the deep seabed.
- **Support calls for moratoria on DSM** until further research has been conducted on its environmental impacts such as through the 2021–2030 UN Decade of Ocean Science for Sustainable Development.
- **Set conditions for any possible future purchase of DSM minerals** and adopt a position to not purchase from marine protected areas in recognition of the fact that approximately 13% of known deposits are located in existing marine protected areas.
- **Support research and development** on substitutes for deep seabed mineral resources.
- **Strengthen the circular economy approach** to reduce demand for minerals by substituting, recycling, recovery, etc.

FINANCE

DSM requires a high level of investment but due to the potential for extended development times, public controversy, litigation and unstable legislative environments, there are several barriers to the economic viability of financing DSM. It is a risky sector to finance and current financing models remain obscure. Potential investors should particularly be well informed about the environmental and cultural risks associated with DSM.

- **Public sector finance**: Governments and regional organisations, notably the European Union, have supported research programmes to advance the science, technology, and legal frameworks, and exploration consortia.
- **Private finance:** As exploitation has not commenced in DSM projects, the exploratory or "venture" stages do not require the significant financing commitments which the exploitation or mining stage would. Mining companies are borrowing money from international banks, raising funds on the capital markets and insurance companies are considering the sector.
- There have been very limited examples of mining to date in national waters, and projects to date such as in Papua New Guinea, which were reported to be financed by a range of international banks, have not gone ahead due to financial problems faced by companies involved.

Several prominent potential end-users businesses have already committed not to purchase minerals mined from the deep seabed.

RESOURCES: GUIDANCE

Some useful international standards and guidance

On DSM
- UN Convention on the Law of the Sea (UNCLOS) (1982)
- ISA Mining Code – Regulations on Exploration & draft Regulations on Exploitation and accompanying guidance, standards & recommendations

On Marine Protection
- Intergovernmental Conference on an international legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (on-going)
- UN Convention on Biological Diversity (1992)

RESOURCES: INITIATIVES

Some useful existing work / initiatives

Collaborative programmes of marine research on the deep seabed
- UN Decade of Ocean Science for Sustainable Development
- Deep Ocean Stewardship Initiative, InterRidge, Abyssal Biological Baseline Project
- MIDAS (Managing Impacts of Deep-seA reSource exploitation)
- JPI Oceans Mining Impact I & II projects

Multi-stakeholder initiatives
- High Level Panel on a Sustainable Blue Economy
- UN Global Compact Ocean Stewardship Coalition

Conservation organisations with work programmes covering the deep seabed
- International Union for Conservation of Nature (IUCN)
- WWF
- The Pew Charitable Trusts
- Greenpeace

NGO coalitions focused on the deep seabed
- Deepsea Conservation Coalition
- PIANGO
- Deep Sea Mining Campaign
- DSM Observer

Industry initiatives
- World Oceans Council
- Minerals in Depth, World Economic Forum Deepsea Minerals Dialogue

Exploration contracts
- Exploration contracts granted to government consortium and private sector